In the Claims

1. (Currently Amended) A method for descreening a digital image designing filters that approximates the circularly symmetric frequency response achievable using a non-separable filter comprising:

(a) selecting a cut-off frequency and designing therefrom a one-dimensional separable low pass filter (LP), one-dimensional separable low pass filter LP being a row vector having entries $[X_{-n}, X_{-(n-1)}, \ldots X_0, \ldots X_{n-1}, X_n]$;

(b) obtaining a two-dimensional separable filter (LPP) by performing the operation: LP* X LP, LP* being a column vector having the same entries as one-dimensional separable low pass filter LP, two-dimensional separable filter LPP having dimensions given by: {2n+1, 2n+1};

(c) generating a two-dimensional contour plot for the two-dimensional filter LPP;

(d) designing a one-dimensional separable high pass filter (HP), one-dimensional separable high pass filter HP being a row vector having entries $[Y_{-m}, Y_{-(m-1)}, \ldots Y_0, \ldots Y_{m-1}, Y_m]$;

(e) obtaining a two-dimensional separable filter (HPP) by performing the operation: HP* X HP, HP* being a column vector having the same entries as one-dimensional separable high pass filter HP, two-dimensional separable filter HPP having dimensions: {2m+1, 2m+1};

(f) generating a two-dimensional contour plot for the two-dimensional filter HPP;

(g) generating a two-dimensional filter (ONE) when the two-dimensional contour plot for the two-dimensional separable filter LPP overlaps the two-dimensional contour plot for the two-dimensional separable filter HPP, two-dimensional filter ONE having the same dimensions of two-dimensional separable filter HPP with the only non-zero entry of value 1 being located at the center of two-dimensional filter ONE;

(h) subtracting two-dimensional separable filter HPP from two-dimensional filter ONE to create matrix (HPPinv);

(ih) convolving two-dimensional separable filter LPP with matrix HPPinv to obtain non-separable filter DSCRN having dimensions: {2m+2n+1, 2m+2n+1};

(ji) generating a two-dimensional contour plot for non-separable filter DSCRN; and

(k̶j̶) selecting two-dimensional separable filter LLP and two-dimensional separable filter HHP ~~constructing a filter to eliminate moiré in a rendered image~~ when the two-dimensional contour plot for non-separable filter DSCRN is an approximation to a desired circular symmetry~~, the filter being constructed of LLP and HHP~~;

(l) repeating (a)-(j) when the two-dimensional contour plot for non-separable filter DSCRN is not an approximation to a desired circular symmetry;

(m) electronically applying the selected two-dimensional separable filter LLP to a digital image to produce a first filtered image;

(n) electronically applying the selected two-dimensional separable filter HHP to a digital image to produce a second filtered image; and

(o) subtracting the second filtered image from the first filtered image to generate a descreened digital image.

Claims 2-6 (Cancelled)